



(19)

Generated Document.

(11) Publication number: **06331498 A****PATENT ABSTRACTS OF JAPAN**(21) Application number: **05117380**(51) Int. Cl.: **G01M 13/00 G01R 31/00 G01R 31/02**(22) Application date: **19.05.93**

(30) Priority:

(43) Date of application publication: **02.12.94**

(84) Designated contracting states:

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**(54) ABNORMALITY  
DETECTOR IN LOAD  
CONTROL DEVICE**

(57) Abstract:

**PURPOSE:** To judge the abnormality due to the deterioration of load and at the same time improve the judgment accuracy of abnormality.

**CONSTITUTION:** An ECU 24 is provided with a microcomputer 28, a buffer 29, and a heater conduction circuit 30 and a heater 16 of an

oxygen sensor is connected to the heater conduction circuit 30. In the heater conduction circuit 30, a battery 25, the heater 16, a protective resistance RP, and a transistor Tr1 are connected in series and at the same time a shunt resistor RT is connected in series with the heater 16 and in parallel with the protective resistor RP and the transistor Tr1. The heater 16 is subjected to conduction control according to the ON/OFF operation of the transistor Tr1. The shunt resistor RT detects the current value of the heater 16 as a voltage value. Also, comparators 33 and 34 compare a detection voltage VHD at a connection point P with threshold values VTH1 and VTH2 and then outputs the judgment result. The microcomputer 28 judges the abnormality due to the deterioration of the heater 16 and the abnormality in the heater control system according to output signals C1 and C2 of the comparators 33 and 34.

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